

What Is Claimed Is:

1. A method of fabricating a liquid crystal display device, comprising the steps of:
  - forming a gate electrode, a gate bus line, and a gate pad on a substrate
  - using a first mask process;
  - forming a gate insulating layer and an active layer on an entire surface of the substrate;
  - forming a first organic material film on an entire surface of the substrate;
  - removing a portion of the first organic material film to expose a first portion of the gate pad;
  - depositing a transparent film on an entire surface of the substrate;
  - patterning the transparent film using a second half-tone mask to form a data bus line, a source electrode, a drain electrode, a pixel electrode, a channel layer, and an ohmic contact layer;
  - exposing portions of the data pad and data bus line using a third mask;
  - forming a second organic material film on an entire surface of the substrate;
  - depositing a low resistance material on the data bus line;
  - coating a passivation film on the substrate;

removing the second organic material film using a lift-off process to expose a second portion of the gate pad and a first portions of the data pad.

2. The method according to claim 1, wherein the pixel electrode, the source electrode, the drain electrode, and the data bus line are simultaneously formed on the active layer.
3. The method according to claim 1, wherein the transparent electrode material includes indium tin oxide.
4. The method according to claim 1, wherein the low resistance material includes at least one of Cu, Ag, Au, Ti, and W.
5. The method according to claim 1, wherein the step of depositing a low resistance material includes one of an electrical plating method and an electroless plating method.-
6. The method according to claim 1, wherein the step of removing a portion of the first organic material film includes an etching process.

7. A method of fabricating a liquid crystal display device, comprising the steps of:

forming a gate electrode, a gate bus line, and a gate pad on a substrate;

forming a gate insulating layer, an active layer, and a transparent film on an entire surface of the substrate;

patterning the active layer and transparent conductive film to form a data bus line, a data pad, a source electrode, a drain electrode, a pixel electrode, a channel layer, and an ohmic contact layer;

forming a passivation layer on an entire surface of the substrate; and

exposing portions of the gate and data pads,

wherein the data bus line, and the source, drain, and pixel electrodes include the transparent conductive film.

8. The method according to claim 7, wherein the step of patterning the active layer and the transparent conductive film includes a half-tone mask.

9. The method according to claim 7, wherein the transparent conductive film includes indium tin oxide.

10. The method according to claim 7, further comprising the step of forming an organic material film on the gate and data pads before the step of forming a passivation layer.

11. The method according to claim 10, wherein the step of exposing the gate and data pads includes removing the organic material film using a lift-off method.

12. The method according to claim 7, further comprising a step of forming a low resistance metal on the source electrode before the step of exposing the gate and data pads.

13. The method according to claim 12, wherein the low resistance metal includes at least one of Cu, Ag, Au, Ti, and W.

14. A liquid crystal display device, comprising:

a gate electrode, a gate bus line, and a gate pad on a substrate;

a data bus line and data pad on the substrate;

a gate insulating layer an entire surface of the substrate;

an active layer on a portion of the gate insulating layer;

a source electrode, a drain electrode, and a pixel electrode on the active layer; and

a low resistance material on the data bus line,

wherein the data bus line, the gate and data pads, the source and drain electrodes, and the pixel electrode are formed of transparent conductive material.

15. The device according to claim 14, further comprising an auxiliary capacitor including the gate bus line, the gate insulating film, the active layer, and the transparent conductive material.

16. The device according to claim 14, wherein drain and pixel electrodes are integrally formed along a direction of the gate line.

17. A liquid crystal display device, comprising:

a gate bus line on a substrate;

a gate insulating layer formed on the gate bus line;

an active layer formed on the gate insulating layer; and

an auxiliary capacitor electrode including indium tin oxide film formed exclusively on the active layer.

18. The device according to claim 17, further comprising a data bus line on the substrate.

19. The device according to claim 18, wherein the data bus line includes the indium tin oxide film.